

**WAC 173-350, Solid Waste Handling Standards, Rule Development**  
***Informal Comment Period 1: Issue Identification***  
**Compilation of Comments Received by WA Department of Ecology**  
***September 30 – November 15, 2010***

The table below lists individuals who submitted comments for WAC 173-350, Solid Waste Handling Standards, Informal Comment Period 1: Issue Identification. The informal comment period was held September 30 – November 15, 2010. Comments are listed chronologically by the date the comment was received by Ecology.

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<sup>1</sup> Additional documents supporting these comments were submitted and are available upon request.  
Contact Kathleen Scanlan, Washington Dept. of Ecology, at (360) 407-6559 or email: [kathleen.scanlan@ecy.wa.gov](mailto:kathleen.scanlan@ecy.wa.gov)

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**COMMENT 1: Received by Ecology 9/30/2010 via email**

**Submitted by Leo Kypuros**

**Snohomish County Dept. of Public Works - Road Maintenance Division  
Snohomish, WA 98296**

My issue, as a Road Maintenance Manager for Snohomish County is the lack of regulatory clarity and support provided to local government re: the re-use options of street maintenance solids (which does not have to be a “waste”) – solids from street sweeping, and organic material from ditch and shoulder maintenance and storm catch basins.

King County has years of data that demonstrate that this material should not be designated as a dangerous waste, as testing data that Snohomish County and the City of Everett too have, that shows that this material can be re-used and should not be regulated as a dangerous waste – but instead should be seen as a useful product.

It has also been shown and recognized that using test method NWTPH does not work due to “false positives” resulting from vegetative matter mixed in with the soils collected.

It is a waste of a resource and tax payer monies to treat street maintenance solids as a dangerous waste, and can help the State achieve a higher recycling rate.

Before I moved to Road Maintenance I was the Operations Manager for the Solid Waste Division of Snohomish County. During my 15 years in this position I was intimately involved with waste by rail to Eastern Washington. I was surprised that truck-to-rail intermodal facilities handling solid waste were not covered by the WAC. As I have witnessed solid waste train derailments, container fires and storage of containers due to rail related delays (containers are NOT water tight and can be found in poor condition), I feel strongly these facilities should be required to obtain solid waste permits, and be required to have hot load handling areas that are connected to sewer or underground holding tanks where leachate can be safely removed as needed.

**COMMENT 2: Received by Ecology 10/4/2010 via online comment form**

**Submitted by Kathy Pierson**

**Snohomish Health District  
Everett, WA**

**WAC 173-350-990 Criteria for Inert Waste**

Develop a set of testing criteria for determining if a material is chemically inert or not. We have relied on MTCA “Table 740-1” for years, but it is very limited and is outdated. New compound materials, like polymer slurries, are being proposed for disposal at IWLFS. It is difficult to find

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the technical resources to determine if these materials are chemically inert or not. Either update the list of chemicals or develop a methodology to determine if a chemical compound can be considered inert or safe enough to not pose a risk to public health or the environment.

**COMMENT 3: Received by Ecology 10/13/2010 via email**

**Submitted by Ron Kirk**  
**Marysville, WA**

**WAC 173-350-220 Composting Facilities**

My biggest concerns are on the odors Cedar Grove in particular puts out from there operation as you experienced the night our meeting ended in Marysville. Great timing. I would suggest rules should apply to the receivable and grinding of the solid waste be done in an inclosed building with proper and state of the art filtration systems to avoid the escapement of odors.

The most preferred method, would be to enclose the entire facility as they did at the Inland Empire Regional Composting Facilities in Diamond Bar California along with the Inland Empire Utilities agency fully enclosing the entire operation. Its called "The Ogsgood File".

Please see our blog at <http://freemarysville.blogspot.com/> and you can read the entire article in ref to the above.

**COMMENT 4: Received by Ecology 10/18/2010 via online comment form**

**Submitted by Rod Edgar**  
**Spokane Regional Clean Air Agency**  
**Spokane, WA**

**WAC 173-350-240 Energy Recovery and Incineration Facilities**

This comment is in regards to small animal crematories affected by subsection (7) of this section. By definition in 173-300 these crematories are incinerators if more than one animal is cremated at one time. It has been told to us by Ecology that the 12 tons per day exclusion found in Subsection (1)(a) of this section does not apply to subsection (7) thereby making it a requirement that these small crematories do an EIS. This puts an undue burden on animal clinics, veterinary offices and animal shelters with no additional protection of the Environment. We would like to see a change to or a re-interpretation of the rule so that a SEPA checklist and an air pollution agency's permit would be sufficient.

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**COMMENT 5A:** Received by Ecology 10/22/2010 via email

**Submitted by Sally Brown**

**University of Washington - School of Forest Resources  
Seattle, WA**

WA DEPT ECOLOGY COMPOST BMPS - Comments

Minimize ammonia (NH<sub>3</sub>-N) losses and consequent odors, by keeping feedstock mixes balanced with C:N ratios between 20:1 and 40:1. Excess nitrogen (< 20:1 C:N ratio), may released as ammonia, especially if pH of feedstocks are above 7.5.

See Eklind, Y., C. Sundberg, S. Smars, K. Steger, I. Sundh, H. Kirchmann, and H. Jonsson. 2007. Carbon turnover and ammonia emissions during composting of biowaste at different temperatures. J. Environ. Qual. 36:1512-1520

This study looked at the role of temperature as a means to minimize NH<sub>3</sub> emissions and maximize decomposition rate. Tested composting at 40,55, and 67 C all at 16% O<sub>2</sub>. They found that the highest temperature resulted in more than double the ammonia emissions that were observed at 40 and 55 C. Composting at 55C was the best way to minimize ammonia emissions and maximize the rate of decomposition. Temperature appears to be an important means to control ammonia emissions.

**Pile size**

**Pile Size:** This will somewhat be determined by a facility's composting technology and feedstocks. Pile size affects moisture loss, heat retention, and aerobic conditions and speed of the composting process.

Make smaller piles (10 feet high or less) if high volumes of smelly, wet feedstocks are part of your mix. Smaller piles allow you to manage them more intensely to control odors, and allow for more complete air flow.

Piles must be small and porous enough to promote convective/passive air flow, or employ forced aeration or other means to meet aerobic composting requirements.

Check your local fire codes. Fire districts may limit pile sizes to 20 feet high, regardless of the feedstocks or composting technology you use.

Do not drive on your compost pile; this compacts the material, slows the composting process and creates anaerobic conditions.

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It is very true that smaller piles are more easily managed. If intensive management (meeting time and temperature requirements for pathogen destruction) are required, this guidance is sensible. However, in areas where there is sufficient space, it is also possible to create a large pile, leave it for an extended period of time and produce high quality compost. If this is the approach used, it may be necessary to drive heavy equipment on the pile in the process of building the pile. If large static piles are used to create compost it would be advisable to cover the pile during construction and following the completion of construction, with finished compost

Aeration: Sufficient oxygen levels in your compost will help keep odors in check and will speed the composting process. There are many ways to promote aerobic conditions inside a compost pile, including passive aeration, turning a pile and forced aeration.

Temperature control and monitoring can be a good substitute for O<sub>2</sub> monitoring. A pile will reach 55 C only under aerobic conditions. Temperature monitoring is also required for assurance of pathogen kill. It seems that appropriate temperature records (to meet Class A pathogen reduction requirements) are a sufficient way to assure aerobic conditions. It can also be helpful to include large size bulking agents in the material, these create channels for air flow. This will be most important in the early stages of composting. As the pile heats, it is unlikely that excess moisture will be an issue.

## 7. Biofilters

EPA landfill guidelines recommend using finished compost as cover material as a means to oxidize any methane that is released from the landfill. It is likely that a biofilter created with compost would be very effective at oxidizing odorous compounds. See EPA, *Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks* (EPA530-R-06-004)

## Curing piles

If pile temperature remains above ambient but below 55C and piles have gone through elevated temperatures to achieve PFRP, it is highly likely that there is sufficient oxygen in the piles and that turning to introduce additional oxygen isn't necessary. This would not be the case for piles that have not gone through PFRP. For piles that have not previously maintained 55C, elevated temperatures below 55 C may be a sign of anaerobic conditions

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**COMMENT 5-B (2<sup>nd</sup> comment by S. Brown):                      Received by Ecology 11/15/2010 via email**

**Submitted by Sally Brown**

**University of Washington - School of Forest Resources  
Seattle, WA**

**173-350-220 Composting Facilities**

The proposed BMP for siting and operating composting facilities in Washington State provides important information on odor control, feedstock management, blending and grinding and managing compost piles.

Much of this guidance stems from the basic premise that intensive management is the best option for maintaining aerobic conditions in the compost pile. Maintaining aerobic conditions is the best way to produce a stable material in a short time, control odors, and eliminate pathogens. Sufficient aeration can be maintained within a pile by increasing inputs into the pile. This is the approach that the BMP appears to be advocating. In the section on porosity guidance is provided on grinding including specifications appropriate particle size (1-4"). In the section on aeration-the BMPs recommend small piles in the absence of forced aeration as well as oxygen monitoring. However, while these recommendations are appropriate for maintaining aerobic conditions in intensively systems, they can be problematic for low input composting that has been shown to be an effective technology for certain feedstocks including yard waste and woody debris.

I was asked to comment on these proposed BMPs by a composting company that primarily composts green wastes in large static piles. The piles are well above the size recommended in these BMPs and the composting technique used by this company involves mixing in very large branches and other woody material as the pile is constructed. As the proposed BMPs point out- these large woody materials do not actively compost. However, they provide large channels for oxygen diffusion. As the pile is cured and screened, the larger woody pieces can be recycled into new piles. Over time, these branches and other woody materials will decompose. This provides an effective, low input option for assuring air -flow through a static pile. A similar process had been used at a biosolids composting facility in MD where rubber tires were mixed in with biosolids to create voids for oxygen diffusion. Use of large woody debris for a similar purpose offers a much more environmentally friendly option than shredded tires.

Compost piles, like soils, will contain a heterogeneous mixture of well- aerated and anaerobic microsites during the composting process. Problems with insufficient aeration include odors, slowed decomposition, greenhouse gas emissions, and potential for pathogen survival.

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Previously the WA DOE compost regulations have required composting facilities to meet time and temperature requirements for production of Class A composts only when a portion of the feedstocks being composting include putrescible materials (food wastes) or municipal biosolids. Other states, namely California, require all compost produced to meet Class A pathogen reduction standards. While it is laudable to set high standards for all types of composts, it is likely not a necessary precaution for feedstocks with low potential pathogen concentrations such as yard waste. Static pile systems, with a sufficient residence time are sufficient for these feedstocks to produce a stable soil amendment. It is also likely that these systems will result in the destruction of any pathogens that might be present as a consequence of long composting/curing times.

It is also possible to reduce odors and emission of GHGs from static piles by covering piles with finished composts. Use of finished compost as a means to eliminate methane emissions from landfills has been advocated by US EPA. Compost is also used for odor control. Recent studies have shown that mixing finished compost with new feedstocks is an effective way to reduce N<sub>2</sub>O emissions.

Static pile systems are often less expensive to operate. Additional regulations on these systems that are not mandated by any health- based risk may result in the closure of facilities. Ecology should promote composting of a wide range of organics. Forcing all facilities to adhere to Class A pathogen reduction requirements or intensive management requirements, even when low pathogen feedstocks are being handled, is likely to result in less beneficial use of certain materials.

It might be advisable for Ecology to provide guidance on appropriate means to construct static pile systems for low pathogen feedstocks. For these systems, incorporation of large size particles would help to maintain aeration. For static pile systems, this would also enable construction of larger piles which would make composting economically viable. It would be a means to maintain sufficient moisture within larger static piles as well. Large scale static piles, using large woody debris as a means to maintain air flow, offers the potential for low input compost systems that can effectively manage low pathogen feedstocks.

**COMMENT 6:           Received by Ecology 10/28/2010 via online comment form**  
**Submitted by Rose Swier**  
**Mason County Health**  
**Shelton, WA**

WAC 173-350-100 Definitions

“wood waste” definition should not include the words “solid waste”. Do a better job defining composting. We had a company claim that they weren’t composting because they weren’t

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“managing the piles under controlled conditions.” They felt that this would allow them to just heap the material and let it sit.

WAC 173-350-220 Composting Facilities

Include a subsection on in-vessel composting.

WAC 173-350-310 Intermediate Solid Waste Handling Facilities

Insure that drop box facilities have to have the drop box under a cover/roof out of the weather.

**COMMENT 7: Received by Ecology 10/29/2010 via online comment form**

**Submitted by Andy Comstock**

**Tacoma-Pierce County**

**Health Department**

WAC 173-350-020 Applicability

Please clarify the applicability of the rule to the management of landfill gas. Specifically, is the processing of landfill gas into beneficial products or the conversion of the gas into other forms of energy considered to be a solid waste handling activity subject to this regulation?

WAC 173-350-100 Definitions

The issue of clean versus contaminated soils continues to need clarification in this rule. What is needed for consistent application of the rule is specific numeric criteria that proponents and regulators can utilize.

Please define what constitutes a “recycling facility”. Substantial confusion continues to exist between the terms “recycling”, “material recovery facilities” and the undefined term “recycling facility”.

173-350-320 Piles Used for Storage or Treatment

Please clarify the applicability of the piles standards to the temporary storage of wastes. It is the Tacoma-Pierce Co. Health Department’s recollection that Ecology intended these pile standards to apply to fixed solid waste facilities continuously storing wastes in piles rather than gauging applicability based upon waste-in and waste-out time periods. This standard has been interpreted differently from one jurisdiction to another, resulting in the requirement of a piles permit in some jurisdictions versus regulation as a non-regulated or permit-exempt activity in others.

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**COMMENT 8:** Received by Ecology 11/3/2010 via online comment form

**Submitted by S. Smith**  
**Marysville, WA**

WAC 173-350-220 Composting Facilities

Large composting operations should be entirely enclosed like the LRI facility in Puyallup. This means the entire operation, including incoming and outgoing materials. No exemptions. When compost material is turned or transported, when exposed to the open air by handling, it generates odor, lots of odor! Other states require total enclosures, it works and keeps compost odor from ruining the quality of life if its citizens. Rule makers at DOE should visit the LRI facility.

Run off or leachate from compost piles should be drained into pipes and treated properly and not allowed to puddle up on the ground becoming septic and causing odors.

WAC 173-350-220(4)(i) must be enforced. The rule needs consequence to the operator if odors are detected leaving the composters property. For example, the rule should curtail operations or restrict how much material can be accepted by the composter if odor are leaving the site. Curtailment could be based on odor complaints received by the Health Dept.

What air pollutants are contained within compost odors? What assurance does Ecology have that compost odors are not making citizens sick or causing long term health impacts to communities affected by odor? What about schools and their students? What about property values? WAC 173-350-220 should require ongoing air pollutant monitoring to ensure citizens are breathing healthy air and not poisoned by toxics, especially children, people with respiratory problems and the elderly who may be be most at risk. Regardless, odor is a nuisance and should be regulated and not allowed to migrate off the composters site. No person should have their quality of life degraded by having to smell compost odor. No company should have the right to make a profit at the expense of others. In Maple Valley and Marysville, this is an Environmental Justice issue!

Like landfills who monitor methane gas using monitoring wells surrounding landfills, large composters should also be required to continuously monitor the air (independent 3rd party) around their operations and publish the results via web site.

WAC 173-350-220 should require that composters must be in full compliance with all environmental regulations. For example, the large pile fire that occurred in the summer of 2009 in Maple Valley was preventable if the company had complied with the Uniform Fire Code.

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**COMMENT 9:** Received by Ecology 11/4/2010 via online comment form

**Submitted by Steve Britisch**

**Snohomish County**

**Surface Water Management – Water Quality**

**WAC 173-350-220 Composting Facilities**

Compost facilities issued solid waste handling permits should be required to test end products which contain type 1 feedstocks for the same contaminants and at the same frequency as types 2, 3 and 4. Reporting of these results shall be to the local health jurisdiction as the permit requires. A particular current concern for municipalities which are encouraged or required to codify the use of low impact development techniques by Ecology through Municipal Stormwater Permits, is that compost is encouraged for use in these techniques to reduce discharges of fecal coliform bacteria to surface and ground waters. Developers, municipalities and the general public use compost end products for low impact development projects that contain type 1 feedstocks which contain unknown levels of fecal coliform bacteria. This creates the potential for discharges of additional fecal coliform bacteria to surface or ground waters. Requiring compost facilities to test end products containing type 1 feedstocks will enable users to identify contaminant levels.

**COMMENT 10:** Received by Ecology 11/5/2010 via email

**Submitted by Craig Lorch**

**Total Reclaim/TotalReclaim.com**

**Seattle, WA**

I am requesting the standards clarify the regulatory status of metals destined for recycling and non-hazardous batteries destined for recycling. In particular, I suggest the Department evaluate the following new language to clarify this status:

**WAC 173-350-020 Applicability**

(21) Scrap metals destined for recycling

(22) Spent batteries that do not designate as dangerous waste under WAC 173-303 and are destined for metals reclamation.

**173-350-210 Recycling**

(1)(i) Scrap metals destined for recycling

(1)(j) Spent batteries that do not designate as dangerous waste under WAC 173-303 and are destined for metals reclamation.

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**COMMENT 11:** Received by Ecology 11/12/2010 via online comment form

**Submitted by Pamela Badger**

**King County**

**Solid Waste Division Environmental Programs**

General

Product take back centers - we want to encourage private-sector product take back centers in our communities - we caution Ecology not to over regulate, particularly for simple and low-hazard materials. Product definition - we think it could be helpful to define “product” but caution not to be too restrictive. Online comment forms should be able to print them or save them for our records as a pdf or similar. Support clarification of management of municipal street wastes (also known as vector waste and street sweepings).

WAC 173-350-100 Definitions

Add definitions for “product” (as it relates to solid waste) and “solid waste” (as it relates to products).

We need clear consistent definitions of recycling and beneficial use.

The role, if any, of Alternate Daily Cover (ADC) and Industrial Waste Stabilizer (IWS) needs to be defined and if allowed, limited.

Clarify definition for Limited moderate risk waste and Limited moderate risk waste facility.

It may be helpful to define terms such as Reuse, Recycling, and Beneficial Use in terms of a waste management hierarchy.

The definitions for beneficial use and recycling should be clarified. Under 173-350-100, “Beneficial use” means the use of solid waste as an ingredient in a manufacturing process, or as an effective substitute for natural or commercial products, in a manner that does not pose a threat to human health or the environment. Avoidance of processing or disposal cost alone does not constitute beneficial use. As written, it appears that beneficial use fits under the broader definition of recycling, while in practice beneficial use is not counted as recycling. The State of New Jersey has addressed this concern by offering the following definition: “Beneficial use” means the use or reuse of a material, which would otherwise become solid waste, as landfill cover, aggregate substitute, fuel substitute or fill material or the use or reuse in a manufacturing process to make a product or as an effective substitute for a commercial product. Beneficial use of a material shall not constitute recycling or disposal. Ecology should clarify the definition of beneficial use to include the notation that ‘beneficial use of a material shall not constitute recycling or disposal’.

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WAC 173-350-200 Beneficial Use Permit Exemptions

Support development of beneficial use determinations by rule to streamline diversion of solid wastes, PROVIDING each determination is evaluated thoroughly. Additional exemptions are a concern and should be evaluated thoroughly. Materials must continue to be properly regulated. Adequate regulation, reporting and inspection is necessary. Proper disposal of residual, consistent with adopted solid waste Comp Plans must be required and verified. Develop beneficial use determinations by rule to streamline diversion of solid wastes. Use of construction and demolition materials as alternate daily cover should be considered among these determinations. To date, Ecology staff members have issued written opinions that the application of C&D materials as ADC is disposal.

This determination is based on staff interpretation of the definition of recycling listed under WAC 173-350-100, which states that recycling means transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. The written opinions from Ecology staff conclude that any landfill application of waste material is disposal, regardless of whether the material substitutes the need for mining soils or application of manufactured products.

This determination also appears to be in conflict with WAC 480-70-016(3) which addresses the issue by way of an example: If soil is transported to a landfill to become part of the cover of the landfill, the transportation is subject to regulation as a motor carrier under the provisions of chapter 81.80 RCW. However, if the soil is being transported to a landfill merely for disposal, the transporter is subject to regulation as a solid waste collection company under the provisions of chapter 81.77 RCW. Thus, when the soil in this example is intended to become a working part of the landfill, a cover to prevent dispersal of solid waste by scavengers or weather conditions, the soil itself is not solid waste. On the other hand, if the soil in this example is dumped into the landfill for disposal it is solid waste. The analogy of soil could also be applied to C&D materials used as ADC. Non-native soils used as ADC at landfills tend to be contaminated or otherwise unfit for use in structural fill or topsoil. C&D materials used as ADC tend to consist of residuals from the processing of comingled C&D, where the more valuable materials have been removed and recycled. When C&D replaces the need to mine native soils or manufacture new materials to be used as landfill cover it appears to meet the criteria of a 'usable material' under the state's definition of recycling. The classification as a usable material is further buttressed by the American Society of Testing and Materials which lists C&D as an acceptable ADC material under Standard Number D6523.

We are aware of the potential for abuse when C&D-based ADC is considered as a beneficial use. However, the potential for abuse by itself should not justify exclusion of an otherwise legitimate process. Instead, parameters that will help ensure legitimate use should be developed. For C&D-based ADC, this should include, at a minimum, specifying maximum

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thickness of cover, maximum grain size, and proper recordkeeping procedures by the landfill operator. Finally, it should be noted that market forces will help to limit the amount of C&D materials used as ADC/

WAC 173-350-210 Recycling

Clarify residual waste terminology to prevent facilities from sham recycling by calling their waste stream a 'product'. Clearly state that residuals bound for disposal must be handled consistent with the applicable comprehensive solid waste management plan and reported as such.

WAC 173-350-310 Intermediate Solid Waste Handling Facilities

Clarify confusion between annual reporting for intermediate solid waste handling facilities vs annual reporting for recycling facilities/mrfs.

WAC 173-350-360 Moderate Risk Waste Handling

Clarify MRW facility requirements to minimize variability in interpretation.

WAC 173-350-990 Criteria for Inert Waste

Clarify the inert waste section in regards to roofing materials.

**COMMENT 12: Received by Ecology 11/12/2010 via online comment form**

**Submitted by Barton Kale**

**Nucor Steel Seattle, Inc.**

**Seattle, WA**

WAC 173-350-100 Definitions

"Processed Scrap Steel" is clearly exempted from the definition of solid waste in the Hazardous and Dangerous waste regulations but is not excluded in the definition of solid waste in the recycling regulations. Our position is that once "scrap steel" becomes "processed scrap steel" it should be considered a marketable raw material and not a recycled solid waste. This was clearly the intent of the EPA when it made this change under RCRA. In the example of scrap steel the recycling takes place when the solid waste gets transformed, by the scrap processor(shredding, cleaning, sorting and decontaminating) into a commodity worth hundreds of dollars/ton to steel mills (processed scrap steel).

WAC 173-350-210 Recycling

Steel mills melting recycled steel should be exempt from the definition of a "recycling facility" (that takes in solid waste) due to the fact that it purchases a commodity on the open market (processed scrap steel). That once the scrap steel gets transformed into "processed scrap steel" the steel mill no longer is taking in a recycled solid waste material (by definition) but a

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purchased raw material with an advertised specification and an expectation or guarantee of quality and performance backed by the seller (scrap processor).

**COMMENT 13:** **Received by Ecology 11/12/2010 via email**

**Submitted by James R. (Rick) Dawson**

**Benton-Franklin Health District**

**Land Use, Sewage and Water Section**

**General Comments**

It would be nice to have terms (definitions) used in the text of 173-350 linked electronically to the definitions in 173-350-100 and vice-versa. For instance, if I clicked on “nuisance odor” in the definitions it would find all of the solid waste regs that mention “nuisance odor”.

Financial Assurance needs to be required for all facilities including exempt recycling operations.

**WAC 173-350-020 Applicability**

Exemption 4 is somewhat contradictory to 173-350-230 (Land Application). If crop residues are not managed properly then it quickly becomes a solid waste issue in that spoilage causes foul odors, attracts vectors, and could impact surface waters of the state. Perhaps there should be a reference to 173-350-230 (3) and (4) here??

**WAC 173-350-100 Definitions**

A definition of “waste-derived soil amendment” would be helpful. Provide examples. Or a reference that says “see soil amendments”

Beneficial Use definition is inadequate, it needs to clearly define that use of material must have a tangible benefit.

**WAC 173-350-200 Beneficial Use Permit Exemptions**

LHJ’s need to have more authority in the review and approval of exemptions as they are the responsible for enforcing solid waste rules and generally are the party inspecting facilities.

**WAC 173-350-210 Recycling**

Notification requirements for these facilities are seldom if ever met. Some form of control and/or penalty needs to be in place to insure a review occurs prior to operations. If there is a way to withhold a business license until LHJ acknowledges receipt of notification might be helpful.

These facilities should be required to have some minimal form of financial assurance until they can document their success at actually recycling.

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Perhaps there should some minimal institutional controls (like a fence) in place to prohibit illegal dumping and prevent paper, cardboard, etc from migrating off the site?

WAC 173-350-220 Composting Facilities

1(b) Exemptions-iii and viii are somewhat similar. Viii 40-250 cu yds requires annual testing of finished product....perhaps this can be clarified here instead of in testing section. Why not have exemption viii follow exemption iii (ie renumber viii to iv) and include note about testing requirements?

Exemptions are difficult to follow making them simpler and fewer would be helpful to the public and regulators.

WAC 173-350-350 Waste Tire Storage and Transportation

Waste tire haulers must receive a license from the department of licensing with enforcement coming from LHJ's? This seems to be ineffective and the licensing agency should also do the enforcement.

Bonds should not be an accepted form of financial assurance for waste tire storage facilities.

Are tire bales considered a "product" or "waste tires"? If bales are considered a product, what is preventing a tire recycler from accumulating massive amounts of tire bales? Perhaps a time limit on the amount of tire bales stored on site could be imposed? Say 50% of tire bales stored on site would need to be used within 3 years (or thereabouts) of stocking.

It appears that limited markets for both tire bales and shredded tires both products should be subject to financial assurance until stable markets are demonstrated.

WAC 173-350-410 Inert Waste Landfills

Is the 250 cu yd exemption for inert waste meant to be an annual amount? Can someone accumulate 250 cu yds of mixed rock, concrete, and dirt over several months and then level it off and start over again? Should time limits be imposed?

**COMMENT 14:** Received by Ecology 11/12/2010 via email

**Submitted by Jennifer Keune**

**King County**

**Department of Transportation - Road Services Division**

General Comments

The purpose of the Solid Waste Handling Standards (SWHS) is to "protect public health, to prevent land, air and water pollution, and conserve the state's natural, economic, and energy resources". To accomplish this goal, many waste practices called out in the SWHS must "not

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pose a threat to human health or the environment”. There is no definition of what constitutes a threat to human health or the environment. The notion of something posing a threat to human health or the environment is far more nuanced than saying that it does or does not pose a threat. This language does not recognize the fact that some level of risk (or threat) is inherent in virtually all activities and environments and that it is the level of risk that should be considered in determining how standards should be set. King County Roads Maintenance Section (KCRMS) encourages the Washington State Department of Ecology (Ecology) to consider clarifying what constitutes a threat to human health or the environment. This will help to inform local regulators and those subject to the regulations how to objectively determine whether a particular practice poses an unacceptable threat to human health or the environment. Ideally, it will also provide a process for demonstrating that a particular practice does not pose an unacceptable threat to human health or the environment.

It is common for permittees to operate multiple facilities that serve the same purposes and implement the same procedures and policies at each facility. These situations would benefit greatly from the ability to obtain programmatic solid waste handling permits rather than individual permits for each facility. A variety of programmatic permits available through several state and local agencies in Washington have proven to be an effective, popular option that streamlines the permitting process. KCRMS believes programmatic permits would be appropriate and effective for some types of solid waste handling facilities and we would like to encourage Ecology to consider their addition to the SWHS.

Jurisdictional health departments throughout the state may enforce stricter standards than those contained in the SWHS. This inherently introduces inconsistencies between health departments in how facilities subject to the SWHS are regulated and uncertainty as to what is permissible.

**WAC 173-350-100 Definitions**

The definition of “contaminated soils” contains the term “harmful substances”, which is not defined in these regulations.

The definition of “land reclamation” is confusing. It suggests that land reclamation only occurs when the fill material is composed entirely of solid waste.

The definition for “nuisance odor” is subjective.

This section defines both “public facility” and “private facility”. However, not all solid waste handling facilities fit well into either of these categories (for example, municipal maintenance facilities). If the intent is for all facilities to be classified as either public or private, then the definitions of those two facility types should be revised to better reflect the full range of

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facilities in operation.

Types 1-4 feedstocks, as defined in this section, refer to the jurisdictional health department's determination of risk levels for hazardous substances. What methodology are the jurisdictional health departments using to assess risk levels? The lack of specificity in this chapter introduces the possibility of inconsistent approaches among jurisdictional health departments.

WAC 173-350-200 Beneficial Use Permit Exemptions

The Beneficial Use Determination (BUD) program has been in existence since 1998, however, in 12 years there have only been six successful BUD applications according to Ecology's BUD Registry. All six have been very closely linked to agricultural/food processing waste streams. This suggests that applicability and appropriateness of the BUD program is limited. KCRMS recommends Ecology expand its support of the BUD to include nonagricultural waste streams.

Successful BUD applications only apply to the original applicant. BUDs should apply to the waste stream, not the generator.

WAC 173-350-220 Composting Facilities

This chapter provides a framework for demonstrating that composted material is no longer solid waste. A similar mechanism is needed for street sweepings and vector solids. Currently, generators of these materials are uncertain if and how they can be reused because there is no mechanism through which this waste stream can shed its solid waste label.

WAC 173-350-310 Intermediate Solid Waste Handling Facilities

The design standards in this section include requirements for engineering reports/plans, however, many of the waste handling practices specified as requiring engineering reports/plans are more operational than structural. Thus, they are better dealt with in an operations plan and the need for engineering reports/plans is inappropriate.

This section requires the presence of an on-site attendant during hours of operation and signage at the main gate. This requirement should only apply to facilities that are open to the public. It is unnecessary to require an on-site attendant or signage at facilities that are open only to company/agency staff who are properly trained and familiar with the policies and procedures contained in the operations plan.

173-350-320 Piles Used for Storage or Treatment

The standard schedule for self-inspections, unless otherwise approved by the jurisdictional health department, is at least weekly. This benchmark is not appropriate for all facilities. For

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example, facilities where waste is infrequently handled should not be subject to frequent inspection requirements. A more universal inspection schedule would be one based on frequency of handling.

This section reads as though it was written for facilities whose main function and core focus is solid waste handling. Thus, the requirements seem conservative. However, for facilities where solid waste handling takes place on smaller scales or less frequent schedules, the requirements of this section seem overly cumbersome. For example, why is there no minimum pile size triggering applicability of this section?

Operations plans must include “Forms to record weights or volumes”. This requirement is inappropriate for facilities that record weights electronically (e.g., through computerized scales), since paper forms are not used as part of the record-keeping process.

This section requires contaminated soils and dredged material to be sufficiently characterized prior to storage. This requirement is logistically unfeasible for KCRMS, and presumably, other agencies charged with maintaining the road right-of-way (ROW). In instances when we handle potentially contaminated soils, they are removed from the ROW either following the discovery of existing contamination or as the result of vehicular accidents. It is not usually possible to leave this material in the ROW, yet disposal vendors will not generally accept this material without laboratory analytical data characterizing the material. Our only option is to temporarily store the potentially contaminated soils at a maintenance facility pending laboratory results and transport to an appropriate disposal vendor. The SHWS should allow for this type of exception provided appropriate BMPs are used to protect stormwater, groundwater and soil.

**173-350-360 Moderate Risk Waste Handling**

Under this section, a flammable gas monitoring program is required to ensure that ten percent of the lower explosive limit is not exceeded in the area where moderate risk waste is handled. This is not even required at permitted dangerous waste facilities, which have the potential to manage very high risk waste. SHWS should not be more burdensome than the Dangerous Waste Regulations.

This section specifies the minimum self-inspection schedule to be once each operating day or at least weekly. This is more stringent and prescriptive than the inspection of dangerous waste facilities, at which daily inspections are only required in areas prone to spills. As stated above, the Dangerous Waste Regulations apply to facilities managing dangerous and extremely hazardous waste. Given the lower risk nature of moderate risk waste, requiring more frequent inspections is not justified.

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173-350-710 Permit Application and Issuance

This section states that the jurisdictional health department must file all approved solid waste handling permits with Ecology within seven days of issuance. Ecology then has up to 30 days to review the information and report its findings to the jurisdictional health department. However, the SWHS are silent on what happens if Ecology disagrees with the jurisdictional health department's decision to issue a solid waste handling permit. It is possible that a permittee might proceed with planned development or program implementation in accordance with the approved permit within the 37 day period before Ecology's findings are due. If the findings suggested that the terms of the original permit should or must change, that might place the permittee at a disadvantage if they have already invested financial resources in their solid waste handling operations.

Jurisdictional health departments are allowed to issue permits that are valid for up to five years, or they can reduce the permit term if they choose. As a result, it is possible that one jurisdictional health department might default to longer permit terms than another jurisdictional health department. This could result in permittees conducting similar operations being required to pay higher permitting fees in one jurisdiction than in another. This does not seem equitable or fair and could place certain solid waste handlers at a financial disadvantage.

**COMMENT 15: Received by Ecology 11/15/2010 via online comment form**

**Submitted by Jay Watson, PhD**

**King County**

**Local Hazardous Waste Management Program**

WAC 173-350-100 Definitions

The Local Hazardous Waste Management Program in King County (LHWMP) has three rule issues we would like to see Ecology address.

Clarify the definition of 'product take-back center' (already on Ecology's list) so that appropriate organizations that are not retail (for example, law enforcement collecting unwanted medications) can be recognized as product take-back centers.

Clarify the applicability of the HHW exemption to a variety of locations that may have unwanted medicines from household sources: schools (e.g., school nurse holding medicines prescribed for children), child care programs, jails, boarding homes (e.g., assisted living facilities), group homes, adult family homes, and nursing homes. Based on our work with medicine return pilot programs, LHWMP suggests that all the types of permitted facilities on this list are household exempt, except for nursing homes.

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Clarify the definition of ‘limited moderate risk waste facility’ so that there is no confusion about the number and type of moderate risk wastes that can be accepted by these facilities.

**COMMENT 16: (2<sup>nd</sup> comment) Received by Ecology 11/15/2010 via online comment form**  
**Submitted by Andy Comstock**  
**Tacoma-Pierce County Health Department**  
**Tacoma, WA**

General

For solid waste facilities that have both an operational municipal solid waste landfill regulated under Chapter 173-351 WAC and other solid waste handling activities regulated by Chapter 173-350 WAC (for example leachate storage tanks, composting operations, HHW facilities, etc.), please clarify whether a single solid waste permit (aka an “umbrella or full permit”) may be issued to the facility. Recent legal advice to this agency has suggested that there is no legal basis for such an “umbrella or full permit”.

173-350-320, Please specify specific standards or methods for measuring residence times for wastes at piles facilities. The existing residence time standards are extremely difficult to measure reliably, hence difficult to enforce.

Permit Exemptions - The experiment with “permit-exempt” solid waste handling facilities has been a flop. This concept was not based upon “prevention”, but rather results in after the fact enforcement & education. A fundamental principal in public health is “PREVENTION”. The Tacoma-Pierce Co Health Department recommends ratcheting back the liberal use of “permit-exemptions” within this rule if not complete elimination. Forcing local permitting agencies (JHD’s) to live with a reactive rather than a pro-active approach to the mitigation of public health impacts at solid waste facilities flies in the face of everything public health stands for.

WAC 173-350-320 Piles Used for Storage or Treatment

Please specify specific standards or methods for measuring residence times for wastes at piles facilities. The existing residence time standards are extremely difficult to measure reliably, hence difficult to enforce.

WAC 173-350-330 Surface Impoundments and Tanks

For ponds lined with geosynthetic membranes, require the use of electrical leak testing methods as a final quality assurance testing method prior to use.

WAC 173-350-400 Limited Purpose Landfills

For landfill cells that are lined with geosynthetic membranes, require the use of electrical leak testing methods as a final quality assurance testing method prior to use. The technology is

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commercially available and has proven itself to be reliable and a cost-effective method at controlling releases from such sites.

**COMMENT 17:** Received by Ecology 11/15/2010 via online comment form  
**Submitted by David Bader**  
**Environmental Health Services LLC.**  
**Bellingham, WA**

WAC 173-350-200 Beneficial Use Permit Exemptions

The BUD process is problematic in a competitive environment and should be reviewed and possibly restructured to fit more closely with industry methodologies and objectives of product manufacturing, if at all possible. The current process does not promote innovation because it can't protect the investor (investment in research and development and permitting) from competitors due to its openness. Also, most materials currently accepted as being recycled have not undergone a BUD process, how do they fit into the requirement.

WAC 173-350-320 Piles Used for Storage or Treatment

Clarify what "storage" means in terms of holding time such as minutes, days, weeks.

WAC 173-350-710 Permit Application and Issuance

Clarify what is intended by section (b)(ii) Investigate every application to determine whether the facilities meet all applicable laws and regulations. Seems like many laws and regulations that a business might fall under may be outside the knowledge scope of the JD.

**COMMENT 18:** Received by Ecology 11/15/2010 via email  
**Submitted by Dean Maas**  
**Marysville, WA**

173-350-220 Composting Facilities

Many in my neighborhood and surrounding areas have repeatedly experienced a sickening stench far beyond a simple nuisance. The authority having jurisdiction (AHJ) has been unable to enforce to a most basic level, citing multiple requirements not listed in 173-350-220 for example. I am referring to the hundreds of complaints this year in Marysville, and to my knowledge, not one source identified and cited with a notice of violation in 2010.

These general comments are intended for ALL POTENTIAL ODOR EMITTERS INCLUDING WASTE STREAMS. I realize 173-350 is more narrowly focused, but my desire is to have these comments eventually apply to all potential emitters, likely including other WAC sections not in scope at this time (304,308, 351,etc). My intent is to comment as a first step in addressing the issues in a very broad sense.

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The specific requirements of 173-350 section must be made measurable with an escalating list of requirements so the AHJ has a framework which ultimately leads to a notice of violation and subsequent enforcement.

My specific requests for incorporation include all potential emitters or waste streams likely to produce offensive odors:

(1) AHJ inspectors are to be trained and evaluated against a standard such as the odor exposure guideline (OGE) system used in Germany. This creates a scientific standard for evaluation and legal record as human noses vary wildly. Inspectors that cannot reliably pass the evaluation are not qualified or allowed to perform odor inspections.

(2) Upon 100 complaints in a year without issuance of a notice of violation (NOV) the area becomes a highly active zone, to be randomly patrolled by qualified inspectors with the specific goal of legally identifying the source. Upon 500 complaints in any 365 day period without an NOV an independent consultant is hired with the task of identifying the specific entity to be assigned the NOV. In this case the NOV is already active; the proof of the source via the final report is the only question to be settled. This is similar to a water pollution issue such as a diesel fuel spill. We know there is an enforceable spill; it is just a matter of investigation as to the source and subsequent legal documentation leading to fines and/or other enforcement means.

I suggest the funding source be an odor mitigation fee on the operating permits of the likely emitters statewide so the funding does not originate directly from any of the potential polluters, which is obviously a conflict of interest. Independent funding also eliminates unfair advantage in disputes between well funded potential emitters versus underfunded potential emitters in the same area.

I hope these comments can be used to move the WAC toward factual resolution versus our current mode of shoulder shrugs and disinformation which consumes a great deal of resources yet generates no improvement in living conditions.

**COMMENT 19:** Received by Ecology 11/15/2010 via email  
**Comment by Pacific Topsoils Inc. / Submitted by Jane Ryan Koler**  
**Law Office of Jane Ryan Koler, PLLC**  
**Gig Harbor, WA**

WAC 173-350-100 Definitions & WAC 173-350-220 Composting Facilities: My wife Sandy and I own Pacific Topsoils, Inc. a Washington corporation which has been making compost for over

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28 years. Pacific Topsoils is one of the largest producers of compost in Western Washington. We make high-quality compost which we sell primarily to discerning customers like nurseries, landscapers, park districts and cities. We actually cannot make enough product to supply the needs of our customers. We also sell a lot of our compost to the State of Washington, including the Washington State Department of Transportation. In its early days, our composting operation attracted observers from all over the U.S. and the world to study it, and in 1989, Snohomish County awarded Pacific Topsoils the Recycler of the Year Award. Every year, Pacific Topsoils takes over 55,000 tons of yard waste out of Snohomish County's waste stream by composting.

For legal and budget reasons, amendment of the regulations should be deferred until the statute is amended in 2012.

We are concerned that the current rulemaking process is out of sequence, because the Solid Waste Handling Act is scheduled for amendment in 2012. It is probable that Ecology will be required to amend the regulations again in response to changes in the statute. Given our state's extreme budget problems, we feel strongly that it would be a much better use of taxpayer dollars to hold off amending the regulations until after the statute itself has been amended. Conducting a single rulemaking process would be a more prudent course of conduct, which would conserve state funds. Further, the objectives of the rulemaking would be more apparent if the process was directed at developing rules to implement new statutory requirements promulgated in 2012.

The purpose of regulations is to implement a statute, allowing the legislature – not the agency – to make policy decisions. Ecology's presently existing composting rules, adopted in 2003, implement the current Solid Waste Handling Act. Ecology has not explained why it must amend the composting rules at this particular time, rather than amending them after the legislature has spoken on what changes are necessary. It would seem that the legislature must speak before Ecology can adopt rules implementing the Solid Waste Handling Act. Otherwise, it appears that Ecology is attempting to dictate changes that the legislature needs to make in the statutes governing composting.

The focus of the present rule-making process is somewhat unclear and interested parties are commenting on the present rulemaking in an information vacuum. Ecology's document specifying the portions of the regulation it seeks to amend was only issued two weeks ago. Due process requires sufficient notice to enable the public to comment intelligently on rulemaking proposals; it is hard to comment intelligently when it is unknown what rules might emerge from the process.

The regulations should continue to distinguish between high-risk and low-risk feedstocks.

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In this rulemaking, Ecology should preserve the distinction between high-risk and low-risk feedstocks, and should not force composters of Type 1 feedstocks to use the same technologies as those mandated for composters of high-risk feedstocks. Pacific Topsoils only composts yard waste; we do not compost high-risk substances like food waste. Presently, the composting regulations explicitly classify yard waste as a Type 1 feedstock and state that it is a low-risk material because it does not present a high risk of pathogens or a human health risk. WAC 173-350-100. Most of our competitors have entirely different operations because they compost post consumer and pre-consumer food waste mixed with yard waste as well as food waste and other materials that the regulations classify as high-risk feedstock. These feedstocks are considered high-risk because they contain an abundance of pathogens and pose a human health risk. It is important that Ecology keep the distinctions between Type 1 feedstocks and other feedstocks, and that it not cave in to pressure from composters of type 2, 3, and 4 feedstocks to force companies that compost only Type 1 feedstocks to implement the same expensive mechanical composting technologies as those Ecology currently requires for feedstocks that pose a higher pathogen risk. Such requirements would not be supported by the science of composting and would stifle innovation, which is directly contrary to the express objectives of the Solid Waste Handling Act.

Requiring all composters to use the same technologies would also award a bonus to national companies that manufacture and sell composting equipment, at the expense of local companies that provide local jobs, local tax revenue, and local waste stream reduction. These national composting technology companies make their money by convincing everyone (including, apparently, regulators) that their product is the only way to safely make compost. But it is not, as some have suggested, Ecology's place to influence the operation of the free market by mandating that all companies must invest in the same technologies. It is not an unfair market advantage to refuse to be taken in by someone selling an expensive composting technology that is not actually necessary for compliance with the Solid Waste Handling Act. It is not an unfair market advantage to have made a conscious decision to compost only Type 1 feedstocks so as to be able to comply with the statute without investing millions of dollars in technology. Perhaps these could be called market advantages, yes – but they are not unfair ones. It is not Ecology's place to attempt to influence competitive markets, but only to ensure that the statute enacted by the Legislature is enforced.

The current regulations are right not to mandate any particular composting technology, and Ecology should not force everyone to use mechanical aeration technology.

We are very concerned that our market competitor Cedar Grove, Inc. has been pressuring Ecology to mandate certain composting methods because they are the methods that Cedar Grove itself has adopted. Throughout a recent round of litigation involving Pacific Topsoils' solid waste handling permit, Cedar Grove and its attorneys continually fed information and arguments to the Snohomish Health District (and, we believe, Ecology itself) in an effort to

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force Pacific Topsoils to change its composting method to a mechanical windrow system or forced air system that would cost our company millions of dollars to re-tool our operation and to retrain our workforce. We also believe that such a system would render our product inferior.

As demonstrated below, the best available science does not support the idea that only mechanical aeration results in aerobic composting.

The existing regulations are absolutely right not to mandate “forced aeration” or any other specific composting technology. Mandating specific composting technologies would frustrate the legislative goals articulated in the Solid Waste Handling Act. The existing 2003 regulations provide:

Composting facilities shall be designed with process parameters and management procedures that promote an aerobic composting process. This requirement is not intended to mandate forced aeration or any other specific composting technology. This requirement is meant to ensure that compost facility designers take into account porosity, nutrient balance, pile oxygen, pile moisture, pile temperature, and retention time of composting when designing a facility.

WAC 173-350-220(3)(d)(emphasis added). The Act encourages “the development and operation of waste recycling facilities”, “ensures that recyclable materials diverted from the waste stream for recycling are routed to facilities where recycling occurs”. RCW 70.95.020(4). Another purpose of the Act is encouraging “the development and operation of waste recycling facilities” and “the activities needed to accomplish the management priority of waste recycling” and achieving the state’s goal “that programs be established to eliminate residential and commercial yard debris in landfills by 2012.” RCW 70.95.030(7); RCW 70.95.010(10). Experts, including Ecology employees, explain that the reason why they demand aerobic composting is because it (1) does not produce nuisance odors, (2) produces a high quality product with an earthy smell, (3) produces a stable product and (4) eliminates pathogens. Our process meets all of these criteria.

When the legislature amends the Act in 2012, it will stay focused on the need to promote recycling and to reduce the recyclable materials deposited in landfills. A recent statement about the 2012 legislative update stated:

We generated nearly 16 million tons of waste in 2008 . . some of it was recycled or otherwise diverted from disposal but not enough. We threw away 9 million tons even though much of it was not really “waste”. For example, in 2003, we buried more than 1 billion dollars worth of recyclable materials in landfills. We have yet to reach the 1995 recycling goal of 50 percent.

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See Exhibit 21. One of the articulated goals of the legislative update process is to “use the competitive market economy to promote innovative technologies and creative materials used.” See Exhibit 21. Given this, Ecology should not attempt right now to impose additional restrictions on composting low-risk type 1 feedstocks. It would be understandable to target such processes if they had been found to present a human health hazard, produced a pathogen-riddled product, or created an air quality nuisance. But they have specifically been found by experts, the courts, and the Puget Sound Clean Air Authority to not present such dangers. Likewise, it would make sense to impose additional restrictions if our process produced an inferior product which would not sell, requiring us to have large mountains of it stored in an *ad hoc* open air disposal facility like our competitor Cedar Grove. This is not the case. Imposing additional restrictions on composting Type 1 feedstocks would turn legislative goals for recycling on their head.

Ecology’s 2003 composting regulations encourage flexibility with respect to composting methods for low-risk type 1 feedstocks and explains that rules governing type 1 feedstocks “are not intended to mandate forced aeration or any other specific composting method.” See WAC 173-350-220(3)(b). Ecology, apparently encouraged by Cedar Grove, has backed away from allowing a flexible approach and appears to be adopting more restrictions, even in the absence of any new legislation. When considering requirements for composting Type 1 feedstocks, Ecology should not take counsel from Cedar Grove, a company which makes compost from high-risk feedstocks and has had continuing, significant air pollution problems and problems selling its product.

Developing more restrictions on composting low-risk Type 1 feedstocks, perhaps driving out of business our successful composting operation that removes over 55,000 tons of yard waste from the waste stream each year, conflicts with the legislative goal of eliminating yard wastes from landfills by 2012. Flexibility and innovation are essential in confronting the current waste crisis; Ecology should be moving away from design-based controls and towards performance-based controls. With a growing population, the traditional way of dealing with waste will simply be insufficient.

Composting science does not support the common myth that only mechanically aerated systems produce a safe and effective aerobic composting method.

Two of the topics addressed by this rule-making process address topics related to Cedar Grove’s claims that we have an uncontrolled, anaerobic method of composting. Ecology will define “controlled” and aerobic composting in this rule-making. Composting science does not support the common misconception that only mechanically aerated systems produce a safe and effective aerobic composting method, and Cedar Grove’s problems with its method provide clear evidence that a mechanically aerated system is not superior to a properly constructed and managed static pile system. Over the years that Pacific Topsoils has been operating, several

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experts have reviewed its composting method: Dr. Harold Keener, Dr. Sally Brown and Dr. Chuck Henry. All of these experts have agreed that we use an aerobic method of composting. Further, both the Snohomish County Superior Court and the Washington State Court of Appeals concluded that our composting method promotes aerobic decomposition and complies with all regulations governing low-risk Type 1 feedstocks.<sup>2</sup>

In the litigation over Pacific Topsoils' solid waste handling permit, the Health District claimed that PTI had an illegal method of composting was based on an opinion letter issued by Ecology. *See Ex. 16*. Apparently adopting Cedar Grove's claims about Pacific Topsoils' method, Ecology claimed in its letter that large static pile composting was illegal, that it was necessary to move and manipulate the pile and aerate the pile to induce aerobic conditions, and that Pacific Topsoils was not controlling its pile. Ecology supplied expert witnesses for the administrative hearing, and Cedar Grove's attorney and its executive Jerry Bartlett attended the hearing. Ecology employee Holly Wescott testified that Ecology approved mechanized composting systems such as that used by Cedar Grove. Although Ms. Wescott and Ecology witness Peter Christiansen claimed that we had an illegal method of composting, they had not visited our operation and clearly did not understand the science behind the method. They conceded that they had not reviewed any study about static pile composting; they could not point to any study concluding that static pile composting is an anaerobic method. They had not conducted any studies of the method, and they simply opined that it was an uncontrolled, anaerobic method. They relied on entirely unfounded, speculative assumptions about our method. By contrast, composting expert Dr. Chuck Henry testified that testing he had conducted at Pacific Topsoils showed we had an aerobic method and produced an aerobic product.

According to recognized composting scholars, it is a myth that a compost pile must be mechanically aerated. Dr. William F. Brinton, Jr., in *Sustainability of Modern Composting*, rejects the notion that aerobic composting demands mechanical aeration. He notes that pile sizes, porosity, and low moisture can profoundly affect oxygen levels within a pile and that "introducing more straw [a carbon rich material]" had effects "similar to introducing more air". *See Exhibit 4*. Similarly, Dr. Sally Brown, another UW composting expert, testified at the hearing that a profoundly aerobic environment can be created by carefully constructing a pile, having low moisture, and incorporating an abundance of carbon rich materials. *See Exhibits 2, 2a, and*

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<sup>2</sup> In that case, Ecology intervened as *amicus curiae* before the Court of Appeals and in its brief argued that certain regulations that expressly related only to Type 2, 3, and 4 feedstocks also applied to Pacific Topsoils. In response, Pacific Topsoils pointed out that if Ecology wanted those rules to apply to Pacific Topsoils, it had to amend the regulations. The Court of Appeals found for Pacific Topsoils and ordered the Snohomish Health District to issue the solid waste handling permit without the contested condition. *See Pacific Topsoils, Inc. v. Snohomish Health District*, No. 63526-3-I (Div. I, April 12, 2010). The timing of this rulemaking procedure is extremely suspect as being in response to the Court of Appeals' decision and aimed specifically at Pacific Topsoils. Enacting a regulation aimed specifically at disadvantaging a particular person or business is a violation of substantive due process.

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2b. She reported that her review of composting literature discloses that there are profoundly anaerobic static piles which are mechanically aerated, and that there is no necessary connection between mechanical aeration and aerobic conditions within a compost pile because the effects of mechanical aeration are fleeting. *Id.*

Dr. Brinton concluded in *Sustainability of Modern Composting* that with a carefully constructed pile, “self aeration can adequately furnish the composting process.” See Exhibit 4. He further concludes that “intensification of composting through technology may be unnecessary”. He observes that composting methods requiring intensification, which have been popularized by trade journals, “do not appear to be scientifically supportable based on these studies.” He also notes that “while low intensive composting has generally been the norm, it has been criticized by modern composters” who are selling expensive engineered composting systems.

The scientific literature demonstrates that by controlling carbon-rich materials, additional aeration is unnecessary. Dr. Brinton concludes that by adding carbon-rich materials into the compost pile (such as hay, straw, and trees), and keeping moisture low, low-tech approaches can be successfully implemented. Composting expert Mr. Jenkins reports that “if a compost pile is properly constructed, no aeration will be needed.” See Exhibit 5. Dr. Brown observes that “the easiest way to reduce anaerobic places in the compost pile is to introduce high carbon materials and bulking materials with low moisture content into the feedstock.” See Ex. 2 at p.24. According to Dr. Brown, Dr. Haug, a composting expert from California, has written that the use of materials with high carbon content is the way to maintain aerobic conditions no matter what type of composting system you use. See Ex. 2 at p. 24. Like Dr. Brinton, Dr. Brown concludes that “it is possible to maintain a highly aerobic system even within a static pile through the control of feedstocks placed in the pile.” See Ex. 2 at p. 24.

Nor do scientists support Cedar Grove’s claims that a mechanically aerated system is necessarily more aerobic or better for the environment. According to Dr. Henry, mechanically turned piles are anaerobic 9 minutes out of every 25 minutes. See Ex. 1 at p. 77. Further, Dr. Henry testified that “not turning a pile is a way of controlling things that are happening in the pile.” Not turning a pile retains moisture. Dr. Henry pointed out that odors are released when piles are turned. See Ex. 1 at p. 53. Composting commentator Joseph Jenkins notes that “the more frequently compost piles are turned, the greater was the loss of both nitrogen and organic matter.” See Ex. 5. Further, according to Mr. Jenkins, when large piles of municipal compost are turned, they give off emissions such as *Aspergillus Fumigatus*, a fungus that poses a health risk to people.<sup>3</sup> Because there is no consensus in the scientific community that turning compost piles promotes aerobic conditions, this is not a control that Ecology should impose on operations using type 1 feedstocks.

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<sup>3</sup> Aerosol concentrations from static (unturnd) piles are relatively small when compared to mechanically turned compost. Measurements thirty meters downwind from static piles show that the aerosol concentration of *Aspergillus Fumigatus* were not significantly above background levels and were 33 to 1800 times less than piles that are turned or otherwise moved.

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Likewise, there is no scientific justification for requiring uniform-sized particles of between 1 and 4 inches in a compost pile. Composting experts such as Dr. Henry, Dr. Brown, Dr. Brinton and Mr. Jenkins all teach that a highly aerobic composting system can be created by carefully constructing a compost pile that incorporates large pieces. Dr. Brown states that “use of high carbonaceous larger materials is the way to control aerobic conditions no matter what composting system you use. See Exhibit 2a at p. 3. Further, according to Dr. Henry, in a static pile large carbon-rich tree branches create pathways for oxygen. There is no scientific justification for a control requiring tiny particles of a uniform size. This would actually reduce porosity and impair aerobic composting.

There is no scholarly literature or study finding that driving at the top of a large static pile creates compaction and leads to anaerobic conditions in the compost pile. This is a speculative theory, and it should not become a composting control adopted through rulemaking without scientific support. This theory shows Ecology’s failure to understand the science of our composting method. Pacific Topsoils’ so-called “pile” is actually a collection of cells that are built up at different times and finish composting at different times. To maintain structure of the cells and air pockets, our plan of operations strictly limits when and how machinery can be operated on the collection of cells. According to Dr. Henry’s observations of our system, aerobic decomposition takes place in each cell for three weeks before any materials are stacked on top of that cell or any vehicle is driven on a pathway near the cell. See *Ex. 1 at p. 7*. The fact is that Cedar Grove has had tremendous problems with its mechanically aerated composting method. It paid over \$500,000 in civil penalties to the Puget Sound Clean Air Authority (“PSCAA”) and over \$14 million in damages to neighbors of its Maple Valley facility in the context of a nuisance lawsuit based on odor. See *Exhibit 12*. It has developed the same odor issues at its Smith Island facility and continues to have these issues at its Maple Valley facility. At Smith Island there are constant neighborhood complaints about odor on newscasts during the summer and in the Snohomish County newspapers. See *Exhibit 12*. The Puget Sound Clean Air Authority has ordered Cedar Grove to correct the odor problems at that facility. Cedar Grove not only has odor problems with its mechanized Gore Cover system, but it also has problems marketing its product; it has a huge mountain of compost product stored on its Smith Island property which it is unable to market. See *Exhibit 11*. Cedar Grove produces a malodorous product; effectively the big pile of unsold product is sort of an outdoor waste facility which is unregulated and creates a neighborhood nuisance. Mike Davis, a neighbor of the Smith Island facility, states that “it’s a solid waste facility and needs to be permitted as such. It’s a dump.” See *Exhibit 13*.

By contrast, Pacific Topsoils has an excellent record with the Puget Sound Clean Air Authority. When Cedar Grove’s attorney was attempting to convince that agency to deny our PSCAA permit, senior engineer Claude Williams explained why the PSCAA would give us a permit:

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Like the EPA's rules, our rules also require a case by case BACT [Best Available Control Technology] taking into account energy, environmental and economic impacts.... In this case we established the top four BACT as the technology that results in little or no odor complaints. In evaluating Pacific Topsoils proposal, we considered the technology appropriate for the size of the facility and the amounts and types of feedstocks that it handles. The proposed technology and others could achieve this level of control. However, the proposed technology may not be able to achieve low levels of odors at a larger facility or one that handles different feedstock like manures. As provided by our rule, PSCAA established work practices and operational controls for Pacific Topsoils to achieve levels of emissions that would result in little or no odor complaints. . . .

Pacific Topsoils has demonstrated that its technology is capable of operating with no odor complaints. PSCAA has identified the critical work practices and controls that Pacific Topsoils has used to achieve this level of control and has listed them as approval conditions.

See Exhibit 10. Our method provides a stable, high-quality, pathogen-free product with very few emissions. It is unclear why Ecology has embarked on adopting additional definitions and restrictions which might drive us out of the composting business. It is also hard to understand why Ecology wants all composting companies to adopt Cedar Grove's method (Gore Cover system with forced air technology) when Cedar Grove has a long history of odor problems and problems marketing its product, while our method has been shown to be an aerobic method with an excellent record with PSCAA.

Ecology should not be attempting to manipulate competitive markets by enacting composting regulations.

Ecology's work with Cedar Grove, Inc. presents the appearance of unfairness and the appearance of favoring one company over others. We are extremely concerned about communications and events which possibly precipitated this out-of-sequence rulemaking process. One of the topics the rulemaking process will address is defining "controlled" and "aerobic composting". These topics are directly related to claims that Cedar Grove has been making about our method of composting. Cedar Grove has waged a vigorous campaign to convince Ecology as well as the Snohomish County Health District that we have an uncontrolled, anaerobic method of composting. Cedar Grove wrote a letter to Governor Gregoire in which its president stated:

Along with other composting facilities, including Bailey Farms, Pierce County Recycling, Composting and Disposal, LLC dba LRI and North Mason Fiber, were commented on action pending before the Snohomish County Health District regarding Pacific Topsoils'

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argument that its practice of storing organic waste in large, uncontrolled piles should be considered composting under State law . . . We hope that Ecology will continue to remain firm in support of state laws and regulations governing these activities. This will assure a level “playing field” for those companies who are performing responsible and valuable recycling services.

See Exhibit 9 for copy of letter from J. Steven Banchero, President of Cedar Grove, to Governor Gregoire. But as the Court of Appeals found in the licensing proceeding, “These facts show that Pacific [Topsoils] does not indiscriminately deposit organic matter onto a pile in an uncontrolled fashion and wait for it to decompose naturally.” Slip Op. at ¶24. It is important to note here that the statute itself defines “composted material” as “organic solid waste that has been subjected to controlled aerobic degradation at a solid waste facility in compliance with the requirements of this chapter. Natural decay of organic solid waste under uncontrolled conditions ” does not result in composted material.” RCW 70.95.030(4). SHD argued that Pacific Topsoils’ method did not meet this requirement of the statute and the Court of Appeals rejected that argument – essentially, finding that Pacific Topsoils’ method did not constitute “natural decay of organic solid waste under uncontrolled conditions that does not result in composted material”. Cedar Grove’s arguments are not supported by the text of the statute, and the regulations should not be changed to reflect Cedar Grove’s arguments. The amended regulations would conflict with the statute.

Ecology seems also to have bought Cedar Grove’s argument that part of its mission is to adopt regulations that will ensure a “level playing field” for Cedar Grove’s business. Ecology argued to the Court of Appeals that Pacific Topsoils’ composting method needed to be declared illegal “to create a level playing field for its competitors”. See Ex. 19 [excerpt from Ecology’s Court of Appeals *amicus curiae* brief]. It claimed that our use of the relatively low-cost static pile composting method gave us an unfair competitive advantage over our competitors who had purchased high-cost engineered mechanized composting systems. Apparently, to Cedar Grove a “level playing field” means forcing its competitors to make the same business decisions it has made. But Pacific Topsoils consciously decided not to compost a combination of Type 1, 2, and 3 feedstocks precisely because we did not wish to incur the enormous expenses and take on the enormous technical problems that Cedar Grove is now faced with. That is not an unfair market advantage; it is simply the benefit of a good business decision. It is not within Ecology’s mission or authority to promulgate regulations in order to give a particular compost company a competitive advantage or to drive another company out of business. Nor is it the proper business of Ecology to adopt regulations that would allow creation of a monopoly. E-mails and letters to regulatory officials from Cedar Grove’s executives and from lobbyist Gerald Smedes present the appearance that Cedar Grove is attempting, behind the scenes, to get Ecology and other regulators to outlaw Pacific Topsoils’ composting technique so as to force it out of business. See Exs. 7, 8a, 8b, 9, 10, 17.

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Now Cedar Grove has suggested how “we” – apparently referring to Cedar Grove and Ecology – can define aerobic decomposition. Cedar Grove executive Jerry Bartlett wrote to Chery Sullivan, the Ecology employee who is providing technical expertise in this rule-making process, as follows:

Cheri, I thought that I would start the process of drafting the language. I have included the current section related to the subject [WAC 173-350-100] and find that we really only need to add a definition under Section 100 for the words aerobic decomposition.

*See Exhibit 7.* This collaborative partnership between Cedar Grove and Ecology about defining crucial composting terms is curious. It is absolutely unclear why Ecology would accede to Cedar Grove’s definitions of good composting when Cedar Grove has huge odor problems and has difficulty marketing its product because of its off putting odor. If Pacific Topsoils were producing an inferior, anaerobic product we would not have such a discriminating customer base and we would not sell all the product we produce each year.

It is odd that Ecology has turned to Cedar Grove and is apparently collaborating with it and its lobbyist about the definition of aerobic composting. That partnership is particularly odd given the fact that Cedar Grove does not compost type 1 feedstocks. Cedar Grove composts Type 1, 2 and 3 feedstocks which Ecology’s own regulations characterize as dangerous high-risk feedstocks. It has no experience composting solely type 1 feedstocks yet Ecology is apparently inclined to ignore Pacific Topsoils’ many years of success in composting type 1 feedstocks, clean record with PSCAA and excellent product and is instead deferring to Cedar Grove’s advice. Ecology employees testified at a hearing that they endorsed mechanized engineered systems such as the Gore system Cedar Grove uses, and regarded it as an aerobic composting method. But these employees have failed to consider the extreme air pollution problems Cedar Grove inflicts on surrounding neighborhoods in Marysville and Maple Valley, and that discriminating buyers such as nursery proprietors and landscapers will not use Cedar Grove’s malodorous product. Inexplicably, Ecology has turned a blind eye to these issues and has apparently been consulting with Cedar Grove about defining composting in a manner which will drive Pacific Topsoils out of business. This is a curious collaboration given the fact that Cedar Grove does not only compost low-risk type 1 feedstocks and has no expertise about it. Technologies and regulations that address the food waste that Cedar Grove composts have no bearing on PTI’s composting method of yard waste.

“Aerobic” should not be defined so as to require a specific oxygen level.

In defining “aerobic” in this rulemaking, Ecology has indicated that it will demand oxygen monitoring and that a specific oxygen level be maintained throughout the pile. One of its recently adopted Best Management Practices (BMP) states that “oxygen levels should be

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measured at different heights and depths throughout the compost pile. Oxygen levels should be predominantly above 10% to avoid anaerobic odor generation.”

This approach has been urged by Cedar Grove. A recent e-mail from Cedar Grove executive Jerry Bartlett to Chery Sullivan, the Ecology employee who is providing technical expertise in this rule-making process stated:

Cheri, I thought that I would start the process of drafting the language. I have included the current section related to the subject [WAC 173-350-100] and find that we only need to add a definition under Section 100 for the words aerobic decomposition.

Here is the existing language along with the new proposed definition. I picked 8% after reviewing the literature and find that although many people recommend > than 30% of odors and best performance at 16%. We are really trying to give alot [sic] of leeway to multiple aeration technologies.

To add a weekly probe of oxygen would add really no labor and the probes are now only \$500 to \$2,000. Not much of a cost burden for anyone. I also thought we should exempt windrow systems because they operation [sic] on actively moving to aerate not injecting oxygen. See Exhibit 1.

WAC 173-350-100 definitions. Composted material. . . composting . . .

New language

Aerobic decomposition means validated and documented oxygen levels on a once per week basis above 8% oxygen have the core of any and all active composting processes. Windrow composting method meeting the time, temperature and turning standards for bio solid standards 173-308 are exempt.

See Exhibit 7. Thus, Cedar Grove is urging a regulatory definition of “aerobic” that would require Pacific Topsoils to conduct weekly oxygen testing and constantly prove that it maintains 8% oxygen at all times, at an unknown expense, while simultaneously giving Cedar Grove a “free pass” by exempting it from the testing requirement – and thus from the requirement of 10% oxygen levels. Cedar Grove/Emerald Services lobbyist Gerald Smedes suggested similar language to be inserted in Pacific Topsoils’ Solid Waste Handling Permit in an e-mail to Ecology employee, Laurie Davis.

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To: Davies, Laurie

Subject: PTI Permit

A few more thoughts about the permit issue. [he was addressing PTI's Solid Waste Handling Permit] One option is to require additional language in the permit. You could simply add the definition of composting out of the regulation and one additional sentence.

Composting means the controlled aerobic degradation and transformation of organic solid waste under controlled conditions designed to promote aerobic decomposition. Natural decay of organic solid waste under uncontrolled conditions is not composting. Aerobic decomposition means the validated and documented oxygen levels on a once per week basis above 8% oxygen at the core of any and all composting processes.

Everybody in the composting business does this except windrows which are turned on a regular basis to aerate.

All facilities have different things in their permits and a clarification by adding one more sentence is perfectly in line with many permit variations.

See Ex. 8a.

Although Cedar Grove executives state that oxygen monitoring is an industry-wide standard and practice and that it is standard to exempt mechanical windrow systems from such monitoring, there is no support for that in the composting literature. It is disturbing that Cedar Grove is proposing to Ecology's technical consultant regulations that by their very terms would apply only to Pacific Topsoils and not to Cedar Grove. It is improper use the present rule-making process as a mechanism to create a monopoly for Cedar Grove and to drive Pacific Topsoils out of the composting business.

PTI strongly opposes defining aerobic composting as Cedar Grove and its lobbyist have proposed. Requiring 10% oxygen in all parts of the pile unfairly discriminates against businesses such as Pacific Topsoils that use a static pile method of composting. According to composting experts such as Dr. Chuck Henry, Dr. Sally Brown and Dr. Brinton, all methods of composting have anaerobic phases. Dr. Henry testified that a turned windrow system is anaerobic 9 out of 25 minutes – about 36% of the time. Similarly, experts such as Dr. Brown and Dr. Brinton recognize that the effects of mechanically aerating a pile are short term; Dr. Brown testified that there are studies of static mechanically aerated piles in composting literature which are substantially anaerobic. According to these experts, there is no totally aerobic method of composting. Ecology's officials conceded this at the hearing in Pacific Topsoils' permitting

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litigation. However, requiring oxygen measurements throughout the pile would favor mechanically turned or aerated piles. Operators could measure such piles immediately after turning or aeration and record high oxygen levels; such levels would not present an accurate snapshot of oxygen levels within the pile and would simply reflect the short-term raised oxygen levels induced by turning or mechanical aeration.

Leslie Cooperbrand, in the *Art and Science of Composting (2002)*, concludes that “oxygen monitoring equipment is available but is expensive” and that “temperature, odors, and moisture are easy to measure and provide a good indication of active decomposition and adequate aeration.” See Ex. 6. Temperature probes can easily establish whether aerobic composition is occurring within a pile. According to Dr. Henry, the production of high temperatures within a pile could not occur unless aerobic decomposition were occurring within the pile. See Ex. 1. Thus, simply adding the requirement that temperatures be measured throughout the process and that specific temperature levels have to be reached within the pile, would ensure that aerobic composting were occurring. This would be a superior method of ensuring aerobic decomposition and would be more evenhanded to all companies regardless of their composting method.

The better standard with respect to the composting of low-risk type 1 feedstocks simply would be to adopt performance standards which demand aerobic composting, measure temperatures within the pile to assure that aerobic decomposition is occurring and prohibit the generation of odors. Pacific Topsoils strongly opposes Ecology adopting a regulatory standard or rule which demands maintenance of particular oxygen level within all parts of the pile at all times. This is an odd standard to adopt given the fact that composting experts agree that maintaining a sufficiently high temperature within the pile demonstrates the existence of an aerobic system. “[L]arge piles maintain high temperatures better than small piles.” See Ex. 6 at pg.6.

Ecology should not adopt a one-size-fits-all approach in defining the term “controlled”.

Ecology has also indicated that it will address the definition of “controlled” aerobic composting in this rule-making. Presumably, the controls recognized by Ecology will reflect composting controls that Ecology placed in its Best Management Practices as well as ideas it expressed in the context of Snohomish Health District’s refusal to renew Pacific Topsoils’ solid waste handling permit in 2009.

The Best Management Practices unfortunately reflect a “one size fits all” approach to controlling composting. These deviate from the present regulations governing composting, which impose many more restrictions on operations using high-risk Type 2, 3 and 4 feedstocks than on those using only Type 1 feedstocks. The current WAC 173-350-220(4)(a)(vi) specifies certain composting methods as well as regulatory controls for high-risk type 2, 3 and 4 feedstocks. The current WAC recognizes that Type 1 feedstocks, in contrast to Types 2, 3 and 4

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feedstocks, “have a comparable low risk in hazardous substances, human pathogens and physical contaminants.” Presently, to further the state legislature’s dictate that no yard waste should be placed in landfills by 2012, the composting regulations do not propose any particular method of composting for low-risk Type 1 feedstocks.

There is no regulatory or scientific justification for requiring composters of Type 1 feedstocks to adhere to the same composting controls required for high-risk Type 2, 3 and 4 feedstocks. Throughout the litigation over Pacific Topsoils’ 2009 solid waste handling permit, Cedar Grove urged Ecology to impose the same controls on all composting operations no matter what type of feedstock used. Such an approach does not make sense. Ecology’s recently adopted Best Composting Management Practices subvert the legislature’s goal of encouraging the composting of yard waste sufficient to remove all yard waste from landfills by 2012. New Best Management Practices requirements appear to specifically target Pacific Topsoils’ operation – such as those that demand mechanical aeration of large piles, require uniform particle size of between 1-4 inches, prohibit driving on piles, demand the measurement of oxygen at all pile heights or depths and state that oxygen levels should be predominantly above 10%. Ecology should decline to extend these standards into the regulations.

Any rulemaking around the definitions of “controlled” and “aerobic” should incorporate performance-based controls, rather than design-based controls.

It would be consistent with the statutory goals articulated in the Solid Waste Handling Act to adopt performance-based controls. This would be a fair and neutral way of regulating, rather than adopting standards that drive one composter out of business and essentially hand a monopoly to its competitor. For example, Ecology could impose temperature monitoring requirements, as discussed above. There is consensus among experts that certain temperatures only can be reached within aerobic systems. Ecology could demand that temperature probes be inserted throughout the pile and that such monitoring be done on either a daily or weekly basis.

Further, Ecology could impose requirements on the curing process and require that all finished compost be tested to ensure that it does not exceed contaminant levels for compost specified in WAC 173-350-220(4)(a)(viii). All finished compost could be testified for stability and pathogens and metals. Ecology could adopt regulations requiring that composting operations not generate nuisance smells. It could adopt controls which prevent the sale of foul-smelling anaerobic product. According to Dr. Brown and Dr. Henry, compost produced by an aerobic method has a sweet earthy smell which is produced by microorganisms called acetomycetes which only can live in an aerobic environment.

Because experts seem to agree that the purpose of requiring aerobic composting methods is to prevent anaerobic operations which emit foul nuisance-type smells, and to produce a stable product without an anaerobic rotten egg smell, all of Ecology’s goals for requiring aerobic

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composting systems could be met by imposing controls through performance standards. Dr. Brinton and Dr. Henry have wisely observed that composting has been done for centuries; it is only recently that engineered mechanized systems have been used. Successful composting was done before such systems were invented.

Ecology should decline to adopt composting controls which have entered the composting sphere through trade journals that perpetuate junk science claims that compost piles must be turned and mechanically aerated. Ecology should adopt performance standards to govern composting businesses which use low-risk feedstocks. Further, Ecology should resist Cedar Grove's invitation to lump the composting of low-risk feedstocks together with the composting of high-risk feedstocks. It does not make sense to adopt controls that would drive Pacific Topsoils out of business when it does not create nuisance odors and it creates a high quality aerobic product that takes 55,000 tons of yard waste out of the waste stream each year.

**COMMENT 20: Received by Ecology 11/15/2010 via email**

**Submitted by Tanya Bird**

**Washington State Department of Transportation (WSDOT)**

**Environmental Services Office**

**New Section Soils/Earthen materials**

Depending how the new language is drafted, it may have a significant economic impact on the construction industry in terms of increased schedule delays and disposal costs when managing excess material from earthwork activities. Please consider how proposed rule changes may unnecessarily present an excessive burden on earthwork construction projects.

To appropriately manage sampling costs and schedules, we ask Ecology to consider only requiring sampling when there is specific information or knowledge that suggests soils may be potentially contaminated. Thus, reasonable due diligence is performed to evaluate soils, as it is currently done prior to construction during NEPA/SEPA environmental documentation.

We also ask that Ecology consider performance based language to allow flexibility in meeting specified goals and objectives. Example language such as, "soils must be disposed or reused in a manner that does not degrade sensitive resources such as wellhead protection zones, surface water bodies, parks, and child-use areas."

There is a significant cost effective viable option for reuse of mildly contaminated soils (concentrations below MTCA levels). Reuse of such soils will save limited landfill space. For statewide consistency, it would help if Ecology proposed general conditions or criteria for where such soils may be reused.

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WAC 173-350-990 Criteria for Inert Waste

Construction projects provide great opportunities for both purchasing recycled content materials and for reducing the amount of construction and demolition debris sent to landfills. Excess material is often considered a waste, rather than a useful product. Options or incentives are needed which are easy to administrate in order to encourage the reuse of concrete slurry, concrete rubble, hot mix asphalt, and recycled glass.

**COMMENT 21: Received by Ecology 11/15/2010 via email and US mail**

**Submitted by Brad Lovaas**

**Washington Refuse & Recycling Association**

**Lacey, WA**

Please consider the following comments on behalf of the Washington Refuse and Recycling Association (WRRRA) relative to the above-referenced rulemaking.

WRRRA is a non-profit trade association which represents the vast majority of solid waste collection / hauling companies in the state. Many of these entities also have ownership of and / or regular business relationships with all manners of solid waste handling facilities. As such, we are very interested in taking an active role in any rulemaking involving solid waste handling.

WRRRA has previously commented on DOE's proposed revision of RCW Chap. 70.95, and other chapters, involving solid waste. We said there, and will reiterate here, that we do not believe statutory revision of these applicable chapters is either necessary or desirable. Rather, if there are changes to be made, the appropriate vehicle is a rulemaking such as that presently being considered. The statutes are certainly broad enough to allow for appropriate and effective rule revision if such is deemed appropriate.

That being said, there is an area within 173-350 which we believe should be addressed; that being the continued existence of exempt disposal facilities. We view this as a very important and dangerous "loophole" which should be eliminated, and can be eliminated by this rulemaking. Simply put, all such facilities should be permitted in accordance with state and local guidelines. To allow any facility to escape the permitting process not only poses a danger to the environment and public health and welfare, it encourages irresponsible and illegal transport and disposal practices by "sham recyclers" and other non-certificated, non-licensed haulers.

As this process continues we are certainly willing to provide specific suggestions for changes to specific rules. For now, however, we wanted the Department to be aware of our major concern here which, again, is the continued, and to us, inexplicable, existence of unpermitted solid waste facilities.

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Thank you for the opportunity for continued comment on this process. We look forward to a continued dialogue on this most important of topics.

**COMMENT 22:** **Received by Ecology 11/15/2010 via email**

**Submitted by Bill Lasby**

**King County - DPH/EHD - Environmental Hazards**

**Seattle, WA**

**General Issues**

The regulation in general is hard to read due to the cumbersome numbering and lettering system used within in each section. Bolding would also be helpful in more easily locating a reference within a section. We I would suggest the following approach/format where appropriate/applicable:

173-350-000 Unknown Solid Waste

**1. Unknown Facility Applicability**

**A.** This section is applicable to . . .

1.) Unknown used as treatment for . . .

a.) The quantity limit for unknown . . .

**2. Unknown Facility Design Standards**

**B.** XXX

1.) XXX

a.) XXX

Public Health would like to see the proposed new section on Soils and Earthen Materials become reality. There has long been a need for state wide standards on the appropriate uses and disposal requirements (clarification on when they are solid wastes?) for contaminated soils, municipals street wastes and other problem soils.

Suggest separating the exempt facility requirements from the permitted facility requirements  
The above can be accomplished as follows:

Indicate requirements within each section pertaining to the specific material being handled  
(e.g. solid waste piles);

Develop an entire section of the regulation devoted to exempt solid waste handling.

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It appears that throughout the regulation, requirements pertaining to exemptions are not consistent. Public Health advises that for all exempt solid waste facilities, notification and annual reporting be required.

It is our experience that exempt facilities require periodic re-inspections to assess continued compliance with the exemption requirements. In addition to notification, which provides the LHJ with a fee for inspection of the facility and review of the notification, an annual or other frequency review fee would be necessary to assess the facility on a yearly, bi-annual, or tri-annual basis. The frequency of the verification site visit would depend upon the risk of the materials being handled. To have effective regulations that uniformly apply to all facilities, it is important that those facilities qualifying for an exemption meet the exemption criteria on a routine basis. This would lessen the occurrence of unfairly competition with respect to permitted facilities. Language in the WAC supporting this approach would be helpful to LHJ's in their justification to applicable local Board of Health entities when proposing a fee increase or new fee.

Additionally it would be helpful to clarify what performance standards would be required for an exempt facility to be permitted.

WAC 173-350-040 Performance Standards

Suggest developing a guidance document for LHJ's to assist with determining which performance standard(s) would most likely apply to a specific type of facility (e.g. concrete crushing → emissions standards).

WAC 173-350-100 Definitions

Suggest adding "Land Clearing Waste": (e.g. "natural vegetation and minerals such as stumps, brush, blackberry vines, tree branches, and associated dirt, sand, tree bark, sod and rocks resulting from land clearing operations"). Adding this definition would help to clarify the distinction between yard waste and land clearing waste.

"Wood derived fuel": remove paint bonding agents and creosote as acceptable components of wood derived fuel. This deletion would make the definition consistent with the exclusions found in the "wood waste" definition

Under composting, clarify the definition distinguishing between mixing of ingredients into soil for soil additive and actual composting.

Suggest modifying the limited moderate risk waste definition to include waste generated from households and Small Quantity Generators (SQG's) and also fluorescent light tubes;

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Recommend modification of Type 1 -4 feedstocks definitions based on risk. Clarify if there are any benefits to the percentage of material in a feedstock determining its' ultimate classification. For example: If a waste has 25% food waste would this make it a type 3 feedstock?

Provide revisions to the definition of contaminated soil to broaden this definition to areas beyond those in the current definition (i.e. it appears the current definition is much too limited).

For material recovery facilities and recycling facilities, provide/establish a maximum on-site storage time for facilities whether permitted or exempt (i.e. similar to the maximum storage time under piles.

Provide definition for the term "street sweepings".

Clarify the distinction between wood waste and yard debris.

Provide minimum treatment clarification of yard waste to render it not a solid waste. For example, how is it to be rendered not solid waste?

WAC 173-350-220 Composting Facilities

Require notification from all compost facilities that wish to operate exempt from solid waste permitting.

Require annual reporting from all compost facilities that wish to operate exempt from solid waste permitting.

Develop a simplified table that lists the requirements for each category of exemption as listed in the narrative portion of the regulation.

Provide BMP's to maximize odor control at the facility (e.g. biofilters, covered Leachate collection ponds, wet compost before turning, all incoming materials are tipped under cover, all cured materials are stored under cover, etc.).

We support comment indicating pile size to be dependent on the facility's composting technical feedstocks (See comments received by Ecology 9/30/10)

Exemption criteria for compost facilities should be presented in a chart, table or matrix format

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What does it mean functionally to prevent migration of air contaminants beyond property boundaries? Clarification is needed.

WAC 173-350-310 Intermediate Solid Waste Handling Facilities

There is much confusion and debate on what qualifies a facility for intermediate solid waste handling status. In regards to exempt facilities I think it is important to quantify, in terms of time, what is considered material recovery that is intermediate in duration. There have been cases where Ecology has referenced the piles standard for guidance. I would like to see a turnover rate incorporated in section 310. Some of the material recovery facilities that are involved in scrap metal recycling look more like pile facilities. I think a reasonable holding time would be 30 days maximum. Beyond that a solid waste permit is required.

Add maximum holding times for source separated recyclable materials at an intermediate solid waste handling facility including maximum turnover time for materials stored in piles.

WAC 173-350-320 Piles Used for Storage or Treatment

Subsection 1(a) discusses applicability in terms of holding times for solid waste material. This provides a loophole for an operator to have a turnover rate that is below the applicability threshold but still operate as a continuous pile storage or treatment facility. I suggest that this subsection be modified to link the turnover rate of the material with the operation of the facility. For example, “putrescible waste piles . . . in place for more than three weeks” and/or a facility or location that stores putrescible waste for more than three weeks is subject to a solid waste permit.

Change the wood waste exemption to include notification and annual reporting. Add annual reporting to the inert waste exemption. The initial notification and annual reporting assist the LHJ in assessing whether the facility is meeting the exemption turnover rate.

Subsection 1.(e), pertaining to the storage of inert waste in piles exemption, requires a turnover rate of 50% of the material used within 1-year and all of the material used within 3-years. Subsection 1.(d) states that compliance with 1.(e) is a requirement for exemption, otherwise, a solid waste permit is required. The remainder of the Section (i.e. 2 through 9) outlines the standards and requirements for operating a *Piles used for Storage or Treatment* facility. There is no reference to a turnover rate in these sections. It is stated that a turnover rate greater than the exemption rate will require a permit but there is no reference or target turnover rate mentioned in the operating standards subsection (4), which is the logical place to establish or reference a turnover rate. A minimum turnover rate should be established in the operating standards section.

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WAC 173-350-360 Moderate Risk Waste Handling

Extend notification and annual reporting for product take-back centers.

Include BMP's for handling and storage of MRW.

WAC 173-350-210 Recycling

WAC 173-350-310 Intermediate Solid Waste Handling Facilities

WAC 173-350-320 Piles Used for Storage or Treatment

It appears that the regulations do not sufficiently differentiate between some of the categories of facility, both in the definitions and in the substantive requirements. For example, there appear to be common elements between the standards for a recycling facility (WAC 173-350-210), intermediate solid waste handling facility (WAC 173-350-310) and a piles facility (WAC 173-350-320), but the differences between these categories remain unclear. Since the requirements for these facilities occupy three discrete sections in the chapter, does that mean that a given facility must be categorized as one or the other, or are piles facilities a specific subcategory of recycling facility or intermediate solid waste handling facility? Further, if Ecology intends a piles facility to be governed by the standards applicable to recycling facilities in addition to the piles facility standards, why not place the piles facility requirements within the recycling section as a subcategory of recycling facility? Similarly, does a piles facility qualify as a type of intermediate solid waste handling facility under 173-350-310 (such as a material recovery facility under WAC 173-350-310(2)), or are the operational requirements for piles facilities limited to WAC 173-350-320?

In contrast to the regulations for recycling facilities, intermediate solid waste handling facilities, and piles facilities, the definitions and operational standards for other types of facilities (notably, composting facilities [WAC 246-350-220] and energy recovery and incineration facilities [WAC 173-350-240]) appear to be more clearly differentiated from one another and from the other facility categories.

WAC 173-350-710 Permit Application and Issuance

Subsection (8)(a)

This subsection reads: "A jurisdictional health department may, at its discretion and with the concurrence of the department, waive the requirement that a solid waste permit be issued for a facility under this chapter by deferring to other air, water or environmental permit issued for the facility which provide an equivalent or superior level of environmental protection." We suggest additional language be provided to this subsection to clarify the standards of environmental protection that the other air, water or environmental permits must meet in order for the facility to qualify for permit deferral. (In other words, equivalent to what?) Ecology has informally indicated that the permit deferral applicant must show that his/her

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other agency permits provide equivalent or superior level of protection as would be provided under a solid waste handling permit, but that is not expressly stated in the language of the regulation itself. Moreover, if that is indeed the intended construction of the subsection, it still begs the question as to which specific permit requirements should be used for comparison. There appears to be insufficient objective criteria to guide the jurisdictional health department's discretion in evaluating whether the applicant's other agency permits satisfy the "equivalent or superior level of environmental protection" test.

**COMMENT 23:** **Received by Ecology 11/15/2010 via email**

**Submitted by Brian Butler, LHg, LEG**

**Landau Associates, Inc.**

**Edmonds, WA**

WAC 173-350-400 Limited Purpose Landfills

WAC 173-350-500 Ground Water Monitoring

Limited Purpose Landfill, Existing Sections WAC 173-350-400, and Groundwater Monitoring WAC 173-350-500)

Section 500 (4)(h) Field Parameters. Geochemical Indicator Parameters. We understand that analyzing groundwater for the naturally occurring and regionally variable major cations (such as Ca, Mg, K, and Na) and anions (carbonate/bicarbonate) allows data to be evaluated using geochemical plots such as Piper Trilinear Diagrams. We think it is important to distinguish the role of these constituents from the role of drinking water quality indicator parameters. We ask Ecology to explicitly exclude these constituents from parameter-specific statistical evaluation used for water quality compliance.

WAC 173-350-100 Definitions

WAC 173-350-410 Inert Waste Landfills

WAC 173-350-990 Criteria for Inert Waste

Inert Waste, Existing Sections: WAC 173-350-100, 410, 990.

General Comment, Section 410. The inert waste category has been, and is a useful subdivision of the Solid Waste Handling Standards. The lower level of regulation for inert waste, as compared to other solid waste, is appropriate.

Criteria for inert waste. Section 990 (2). Listed Inert Waste. The list of inert waste materials in section 990 (2) may be able to be expanded.

Portland cement concrete is an approved inert waste. Portland cement concrete rubble can result in stormwater with elevated pH values. Appropriately implemented measures such as

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industrial stormwater Best Management Practices (BMPs) can control and manage potential impacts.

Other non-listed materials such as grout-amended soils from tunneling activity with elevated pH, may also be able to be handled as listed inert waste.

Criteria for inert waste. Section 990 (3). Inert Waste Characteristics. Ecology may wish to publish a list (online or in a Technical Information Memorandum format) to identify materials that have been approved using Section 990 (3) for inert waste disposal. This will help Ecology offices and applicants to learn from similar requests.

WAC 173-350-700 Permits and Local Ordinances

WAC 173-350-710 Permit Application and Issuance

WAC 173-350-715 General Permit Application Requirements

Permitting. Existing Sections: WAC 173-350-700, 710, 715.

We offer general Permit Section comments to help permit documents focus on the applicable section(s) of the regulations, and contribute to cost effective implementation of Permit and Landfill Plan requirements.

We suggest that Ecology consider developing "model" draft permits (e.g., for inert waste and limited purpose landfills, etc.) that jurisdictional health departments may use. These model permits would assist local health jurisdictions in identifying and applying appropriate regulatory provisions that are applicable for the type of facility being permitted. This approach could provide consistency from jurisdiction to jurisdiction, and improve clarity which would benefit implementation and compliance.

Landfill operations are subject to procedures in an approved Landfill Operation Plan and Permit. The initial permit application review process includes SEPA review of landfill plans by agencies including local jurisdictions. We request that Ecology clarify that routine landfill operation activities (grading activities for contouring, landfill haul roads, stormwater BMPs, and cell closure) may be conducted without obtaining additional, separate local permits (such as grading permits).

Permit Modification. We ask that Ecology define the process for a Jurisdictional Health Authority to change existing permit provisions, and that Ecology identify the role for the owner/operator in that process.

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**COMMENT 24:** Received by Ecology 11/15/2010 via email

**Submitted by Michael Transue**

**Attorney and Counselor at Law, Governmental Affairs & Lobbying Services**

**Construction Materials Recyclers-NW Chapter**

On behalf of the Construction Materials Recycling Association – NW Chapter, please accept the following brief comments on the solid waste material handling rules. We very much look forward to working with you on this. Our members are ready to lend their expertise and assist whenever and however they can.

Steps to coordinate efforts at the state level regarding the transportation and diversion of construction, demolition and land clearing debris (CDL) recyclables are very necessary.

Coordination is vital to ensure that legitimate CDL recycling efforts are not impeded by differing regulations and interpretations by the various State and local agencies. As you move forward, we would encourage you to seek to coordinate and examine the number of efforts that are happening concurrently in Washington that will have also have major impacts on our industry, including:

DOE's review process of RCW 70.95 and its effects on CDL recycling

UTC's rulemaking on the transportation of CDL recyclables. Their website has a lot of documentation in this area.

Snohomish County has current efforts to "flow control" solid waste directly and CDL recyclables indirectly by defining a construction debris box that contains less than 90% recyclable material within it is solid waste and destines those boxes for the landfill. As you can well imagine, the potential to deal with 39 different county "flow control" ordinances would be a nightmare not to mention the adverse effects it would have on CDL recycling state-wide.

Differing opinions at the state and local levels concerning the definition of Alternative Daily Cover (ADC) and Industrial Waste Stabilizer (IWS) as having a "recycling" benefit or "beneficial use" can have unintended consequences with respect to hauling of these useful materials to landfills. Using these materials at landfills rather than native materials conserves the use of our natural resources.

Seattle's newest endeavors on CDL (i.e. bans on certain CDL from landfills, hauler restrictions, Material Recovery Facility (MRF) regulation and certification and renewed enforcement of their 90%/10% "in the box" standard.

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And coordinate all of the above recognizing the scope and authority of the newly adopted WAC 173-345 Transporter Rules.

As you can see, there are a significant number of efforts swirling around CDL recycling at multiple state and local levels. We firmly believe we need statewide policies regarding our industry. Otherwise, we risk having a multitude of city-level and 39 different county-level regulatory (flow control) schemes. Our industry is creating the "green jobs" the Governor so desperately wants. We divert thousands of tons of the waste stream away from filling a hole in the ground and making them "useful" again. We need more efforts to incentivize this recycling activity, not ways to stifle it (as many of these state, county and city proposed methods will most assuredly do). As is the case in many if the above regulatory endeavors, setting arbitrary percentages in the box or at the facility merely serves to take what is readily recyclable and turn it, by words on the page, into garbage. Our state cannot reach it's "beyond waste" goals if we continue to enlist methods and policies that support a "garbage first, recycling second" policy. We must turn to a paradigm that assumes everything that is recyclable should be recycled and the remainder that has no other useful purpose is "garbage."

Finally, We would also encourage you to review the House Parks and Ecology Committee's hearing on HB 1863 from the 2009 Legislative Session. There was a lot of informative information provided at that hearing that may be beneficial to this process. Our PowerPoint (less the last 4 or 5 slides) from that hearing is attached. I will be providing you additional information as we go through the process.

Thank you again for you and your department's efforts in this area. We look forward to working with you to implement and better achieve the policy goal.....more stuff recycled and less stuff considered as garbage.

**COMMENT 25:** Received by Ecology 11/15/2010 via email  
**Submitted by Dave Peters**  
**Kitsap County Solid Waste Division**  
**Port Orchard, WA**

173-350-220

Kitsap County raised concerns about the problems with "preconsumer" and "post consumer" as descriptors of food waste years ago. For example, an apple that falls off your tree can go in your yard waste bin as "preconsumer". It can be composted at a facility that accepts lower risk, preconsumer wastes. If you pick that same apple up and bring it in your house, it has become "post consumer". If you put it in your yardwaste bin, it now must be sent to a facility that handles higher risk "post consumer" materials. The pathogen risk of the apple has not changed.

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The cost of composting it has. Oregon did anyway with this pre and post consumer approach years ago in favor of looking at feedstock risk based on pathogens and contaminants.

The other big issue is one of approach to regulation. One school says you prescribe exactly how all facilities must run and what technology they must use. BACT is the prime example. The problem with this approach is that technology changes and the law becomes dated quickly. The "one size fits all" approach isn't reasonable. Because one facility has extreme odor issues and needs expensive technology to fix it, shouldn't mean that now all facilities need the same technology.

The other approach is to specify performance standards that a compost facility must meet. This approach says here are the goals (odor control, ground water protection, etc.). Tell us what technology you will use at your facility to meet the goals. This allows different solutions based on facility size, feedstock, location, etc.

**COMMENT 26:** **Received (after deadline) by Ecology 11/17/2010 via email**

**Submitted by Peter Moon, P.E.**

**O2Compost**

**Snohomish, WA**

**173-350-220**

I met with Chery Sullivan and Michelle Andrews on Monday (11/15) and they suggested that I submit my comment regarding the current rule. I understand that I've missed the deadline, but I thought that I would submit it for your consideration just the same.

The one change that I think would augment the permit exemption criteria would be to increase the maximum allowable volumes of Type 1 Feedstocks on-site at any one time from 250 cy to 1,000 cubic yards. This would enable landscape companies to divert a considerable amount of green waste from the waste stream, specifically during the fall months when there are tremendous volumes of leaves collected. These leaves are comparatively benign (non-odor/leachate producing) and are an excellent carbon source to mix in with grass clippings the following spring. On-site composting with this nominal increase in volumes would greatly increase general compliance with the law (reducing illegal yard waste piles which are prevalent throughout Western Washington) and greatly reduce the quantities going to permitted facilities which are overloaded during these peak seasons of the year (and causing odor impacts, vis-a-vis Cedar Grove - Maple Valley and Everett sites).

Thank you for considering my comments. I look forward to being more involved with the rule revision process.